



UNIVERSITY OF WISCONSIN SYSTEM
SOLID WASTE RESEARCH PROGRAM
Student Project Report

Assessing the Effectiveness of Wisconsin Recycling Market
Development Efforts

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Objective

To evaluate the effectiveness of Wisconsin recycling market development efforts that occurred in the 1990s, but were subsequently discontinued due to a number of reasons ranging from budget limitations to the perceived program effectiveness.

Introduction

Wisconsin recycling market development efforts were created under the Wisconsin Solid Waste Reduction, Recovery, and Recycling Law (aka Recycling Law) (s. 287.25, Wis. Stats.; ch. NR 548, Wis. Admin. Code) in 1990. These efforts included grants, loans, and technical support awarded through the Waste Reduction and Recycling Demonstration Grant program (WRRDG) (s. NR 548, Wis. Admin. Code) and the Recycling Market Development Board program (RMDB) (s. Ch. 560, Wis. Admin. Code).

The Waste Reduction and Demonstration Grant program was administered by the Wisconsin Department of Natural Resources (WDNR) and funded innovative solid waste reduction and recycling demonstration projects. Eligible applicants included municipalities, counties, school districts, tribes, public entities, businesses and nonprofit organizations (s. NR 548, Wis. Admin. Code). A yearly budget of \$500,000 was allocated until 2007 Act 20, increased it to \$1.5 million beginning in 2007-08. The program awarded 192 grants with \$13.3 million. Allocations to the program were not provided in the 2009-2011 budgets (Wisconsin Legislative Fiscal Bureau, 2009).

The Recycling Market Development Board (RMDB) issued grants, loans and rebates to develop markets for recycled material products. Awards of up to \$500,000 were given to eligible businesses and governmental agencies from fiscal year 1993 through 1999. Total awards equaled about \$26.6 million on 193 projects. Allocations for the program stopped in 1999 with the RMDB repealed in 2003 Act 33 (Wisconsin Legislative Fiscal Bureau, 2009).

Methods

Recycling Market Development Efforts in the United States

State websites and online documents were searched for recycling market development efforts in the United States. Program information documented included: organizing agency, program title, recipients, amounts (some divided by years), and program logistics.

Wisconsin Program Information

Recycling Market Development Board award information was obtained from the Wisconsin Department of Commerce's Finance Office. Information included: reference number, funding type (grant or loan), date of distribution, program, status, amount, and name of awardees. Commodity, project summary, and awardees' city was obtained from the RMDB – Total Funding Initiatives report from University of Wisconsin-Extension (UWEX).

WDNR Waste Reduction and Recycling Demonstration Grant information was obtained from the WDNR Waste Reduction & Recycling Demonstration Grant Program webpage. Information obtained includes: awardees, reference number, location, description, grant amount, date

awarded, and material. Further information came from links to several grants along with a final report from the WDNR Bureau of Community Financial Assistance.

University of Wisconsin System Solid Waste Research Program (SWRP) information was obtained from the UWS SWRP manager, including: principle investigator, campus, fiscal year, funding amount, material, and research title. Project descriptions were taken from summary reports.

Viable Entities

To determine whether entities were still viable organizations, contact information on the awardees was gathered by performing an online web search for the businesses, non-profit organizations, and government agencies. Information found included: address, phone number, contact name, contact email, and website. To confirm whether businesses were viable entities, the 2010 Wisconsin Manufacturers & Business Directory was also reviewed.

Survey

Two preliminary surveys were developed by determining relevant and necessary information needed to conduct an economic assessment of Wisconsin Recycling Market Development Efforts. There is a survey for the RMDB (Appendix I) and WRRDG (Appendix II) asking identical questions that referenced the particular program. Questions asked pertain to:

- Organization Information (NAICS code)
- Program Specifics (How the organization learned about the program, program positives & negatives, etc.)
- Project Finances (Cost, percentage funded by program, other financial assistance, funding need)
- Project Outcome (Material diverted, troubles, new markets)
- Economic Impacts (Employee statistics, revenue)
- Whether the organization is still recycling
- Future recycling market development needs (If funds were available, could the organization utilize those funds)

The preliminary survey was validated during the 2011 Wisconsin Integrated Resource Management Conference in Green Bay, Wisconsin, with the help of Neil Peters-Michaud from Cascade Asset Management. Several companies were identified to test the survey, including Commercial Recycling Corporation, Cascade Asset Management, LLC, Barron County Habitat For Humanity Restore, Chicago Art & Glass Jewels, Inc., Bonstone Materials Corporation, FEECO International, Inc., GranTek, Inc., CRI Recycling Services, Inc., Reynolds Urethane Recycling, Inc. and Plymouth Foam Products.

Results

Recycling Market Development Efforts in the United States

A literature review of historical and current recycling market development efforts throughout the United States found that 16 states currently have at least one program providing grants or loans (six states have only a loan program) to businesses and nonprofit organizations. The other 34 states, including Wisconsin, do not currently have programs. This was primarily due to the fact

27 states have never had programs and the other states have been freezing or eliminating programs. Four prime examples of states that currently have at least one program are Colorado, Nebraska, North Carolina and Missouri.

Colorado's Department of Public Health and Environment has awarded 42 grants totaling over \$4.1 million to local governments and businesses with the Recycling Resources Economic Opportunity Fund Grants Program. The program was designed to help develop recycling infrastructure and promote economic development for various waste streams. Eligibility is given to public and governmental agencies, nonprofit and for-profit organizations, and out-of-state organizations looking to expand or relocated to Colorado.

Nebraska's Department of Environmental Quality provides Waste Reduction and Recycling Incentive Grants to public, private, or non-profit organizations and political subdivisions. An estimated \$3.4 million is available annually for integrated solid waste management programs, planning, and projects. Funds are collected from a fee imposed on retail businesses, a \$1.25 fee per ton on all waste disposed of in municipal solid waste landfills and a \$1 fee on each new tire sold in Nebraska.

The North Carolina Department of Environment and Natural Resources' Division of Pollution Prevention and Environmental Assistance established the Recycling Business Assistance Center to provide various programs, including financial assistance. Recycling Business Development Grants were worth \$4,000 to \$50,000. In 2010, 31 projects were provided \$750,000 and in 2009, 29 projects were awarded \$600,000. The purpose of the grant is to reduce solid waste material entering disposal facilities and encourage solid waste material recovery. The North Carolina Recycling Loan Fund averages \$75,000 for capital, inventory, equipment, and real estate expenses for small businesses. Loans have varied between \$10,000 to more than \$1 million. A special tax credit is also given to individuals and corporations for the purchase of resource recovery or recycling equipment or facility construction for resource recovery and recycling.

The Missouri Department of Natural Resources' Environmental Improvement and Energy Resources Authority has funded 84 projects since fiscal year 2001, totaling about \$3.8 million. The Missouri Market Development Program supports individuals, private, public and non-profit entities for equipment purchases used for final processing of recyclables or in the manufacturing of new products made from recovered materials. Grants fund up to 75% of the total project cost with a maximum of \$50,000.

Wisconsin Data Summary

Information on the Recycling Market Development Board Program (RMDB), Waste Reduction and Recycling Demonstration Grant Program (WRRDG), and Solid Waste Research Program (SWRP) have been obtained and summarized in an Excel spreadsheet.

A total of 516 grants/loans (Figure 1) totaling \$36.4 million (Figure 2) were distributed between the three programs. The Solid Waste Research Program provided 131 grants for \$3.3 million between fiscal year 1989-1990 and 2009-2010. The Recycling Market Development Board program distributed 193 grants/loans totaling \$19.9 million between 1994 and 1999. The Waste Reduction and Recycling Demonstration Grant awarded 192 grants totaling \$13.3 million between 1990 and 2008.

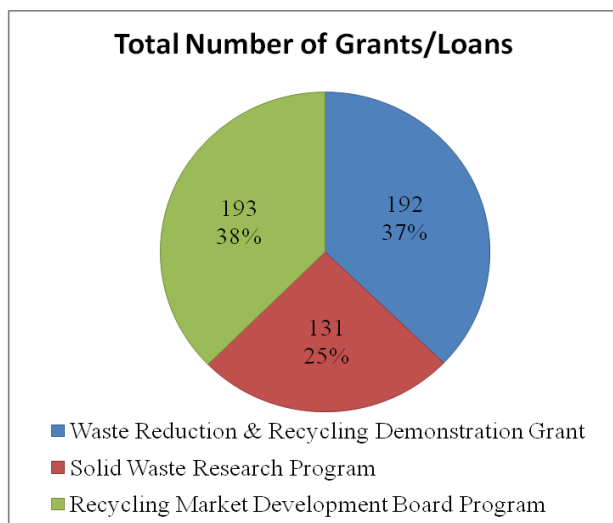


Figure 1. Total number of grants/loans distributed by three Wisconsin authorities for recycling market development.

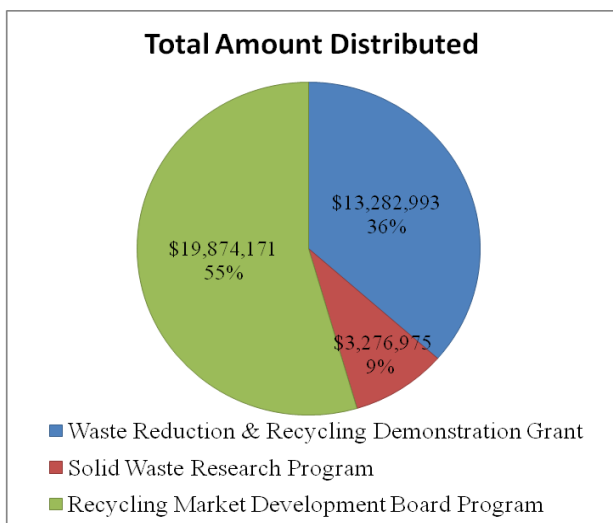


Figure 2. Total amount of funds distributed by three Wisconsin authorities for recycling market development.

Funding

Funding is broken into two categories, loans and grants. Out of the 516 awards given out, 481 were grants (\$27.3 million) and 35 were loans (\$9.2 million). Figure 3 shows the number of grants and loans according to program and Figure 4 shows the amount of grants and loans according to program. All the WRRDG and UWRP awards were grants, 192 (\$13.3 million) and 131 (\$3.3 million), respectively, along with 158 (\$10.7 million) from the RMDB. The loans were all distributed by the RMDB.

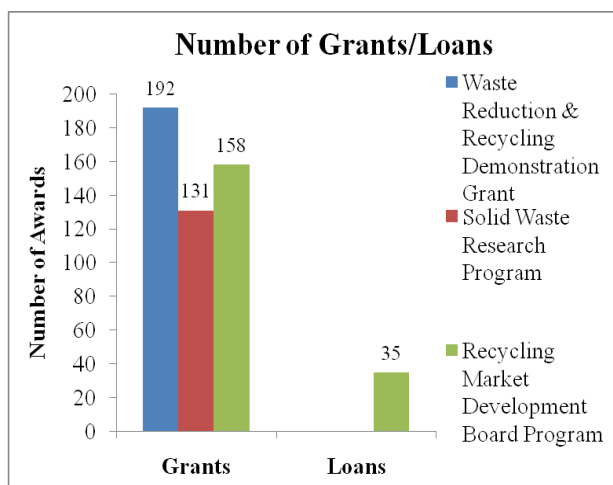


Figure 3. Number of grants/loans divided by funding type and program.

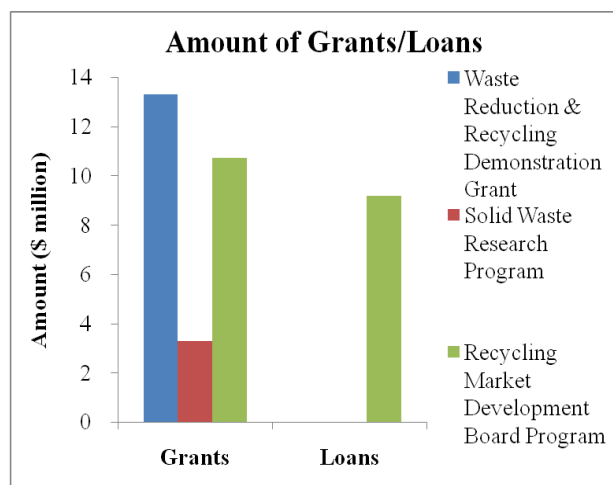


Figure 4. Amount of grants/loans divided by funding type and program.

Material

To assess the different programs, 12 material categories were established. The top five materials funded were construction & demolition (82 awards, 16%), education (74 awards, 14%), industrial (71 awards, 14%), plastic (63 awards, 12%), and other (61 awards, 12%). The other category includes various or more than three recyclable materials, aerosol/paint cans, aluminum

containers, mercury, or petroleum products. Other categories include paper (46 awards, 9%), compost (43 awards, 8%), glass (22 awards, 4%), textiles (21 awards, 4%), food (14 awards, 3%), electronics (11 awards, 2%), and tires (8 awards, 2%). Figure 5 shows the number of awards according to category and program.

The categories in order of the most money received are construction & demolition (\$6.2 million), plastic (\$5.8 million), education (\$5.7 million), other (\$3.44 million), industry (\$3.36 million), food (\$2.6 million), paper (\$2.5 million), glass (\$1.83 million), textiles (\$1.8 million), compost (\$1.3 million), electronics (\$1 million), and tires (\$0.9 million). Figure 6 shows the dollar amount of awards according to category and program.

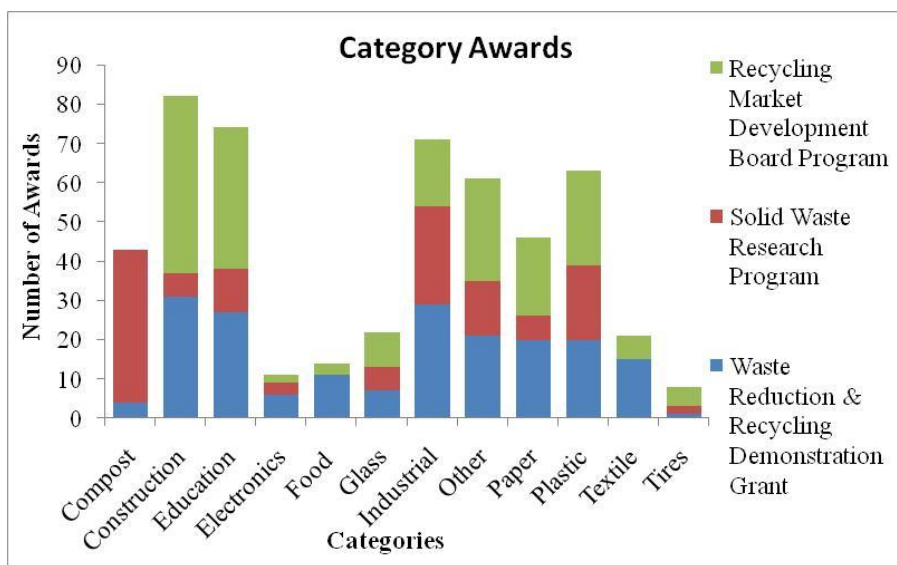


Figure 5. Number of awards according to category and program.

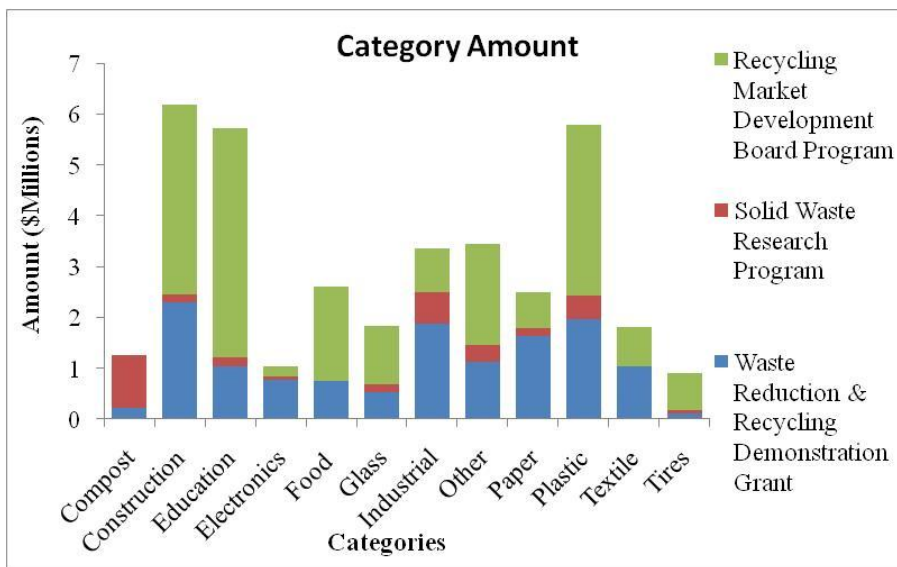


Figure 6. Dollar amount of awards according to category and program.

The WRRDG awards by categories are as follows: construction & demolition (31 awards), industry (29 awards), education (27 awards), other (21 awards), paper and plastic (both 20 awards), textile (15 awards), food (11 awards), glass (7 awards), electronics (6 awards), compost (4 awards) and tires (1 award) (Figure 7). The award amounts are as follows: construction & demolition (\$2.29 million), plastic (\$1.96 million), industry (\$1.87 million), paper (\$1.63 million), other (\$1.12 million), education (\$1.035 million), textile (\$1.033 million), electronics (\$0.76 million), food (\$0.75 million), glass (\$0.52 million), compost (\$0.22 million), and tires (\$0.1 million) (Figure 8).

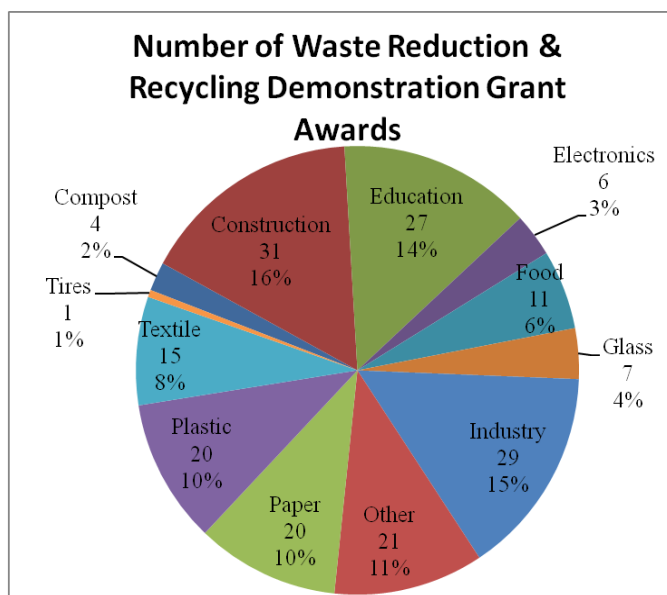


Figure 7. Number of waste reduction & recycling demonstration grant awards according to category.

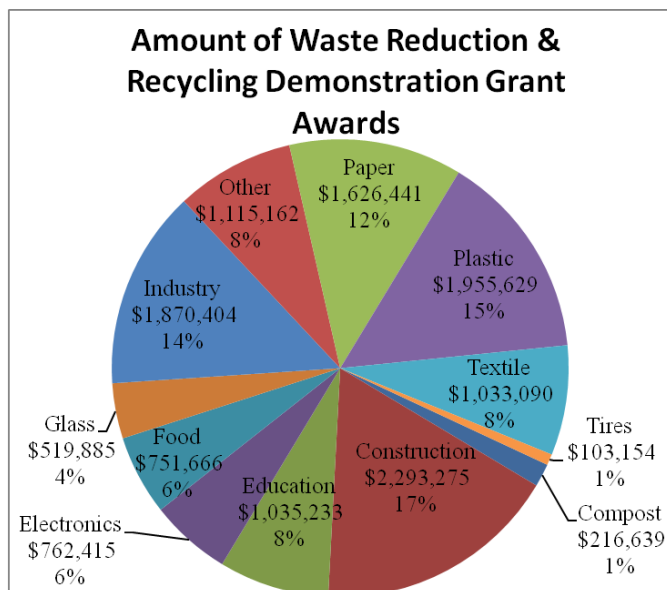


Figure 8. Waste reduction & recycling demonstration grant award amounts according to category.

The following are the number of awards distributed by the RMDB in order: construction & demolition (45 awards), education (36 awards), other (26 awards), plastic (24 awards), paper (20 awards), industry (17 awards), glass (9 awards), textile (6 awards), tires (5 awards), food (3 awards), and electronics (2 awards). The dollar amounts are as follows: education (\$4.51 million), construction & demolition (\$3.74 million), plastic (\$3.37 million), other (\$1.99 million), food (\$1.85 million), glass (\$1.13 million), industry (\$0.86 million), textile (\$0.77 million), tires (\$0.73 million), paper (\$0.71 million), and electronics (\$0.2 million).

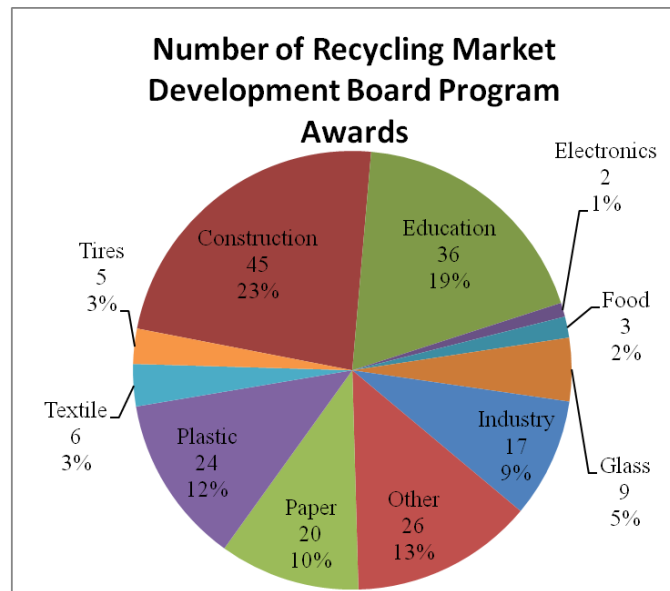


Figure 9. Number of recycling market development board awards according to category.

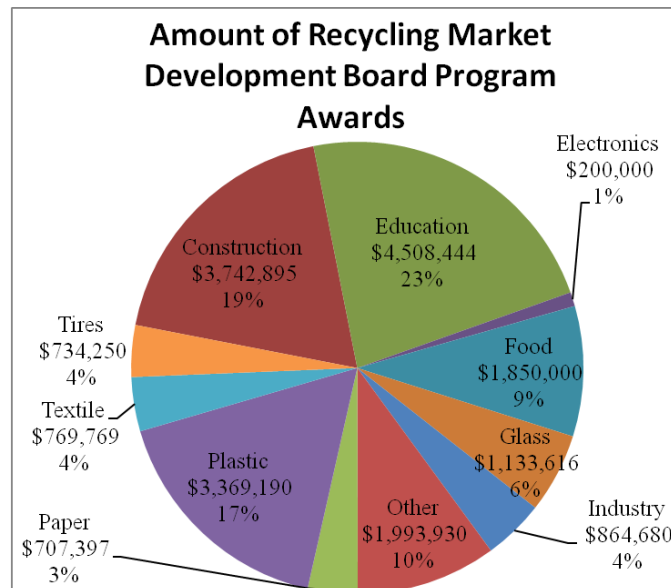


Figure 10. Recycling market development board award amounts according to category.

SWRP awarded grants to the following categories: compost (39 awards), industry (25 awards), plastic (19 awards), other (14 awards), education (11 awards), construction & demolition (6 awards), glass (6 awards), paper (6 awards), electronics (3 awards), and tires (2 awards) (Figure 11). The order according to dollar amounts are: compost (\$1.04 million), industry (\$0.63 million), plastic (\$0.47 million), other (\$0.33 million), education (\$0.18 million), glass (\$0.17 million), construction & demolition (\$0.16 million), paper (\$0.15 million), electronics (\$0.08 million), and tires (\$0.06 million) (Figure 12).

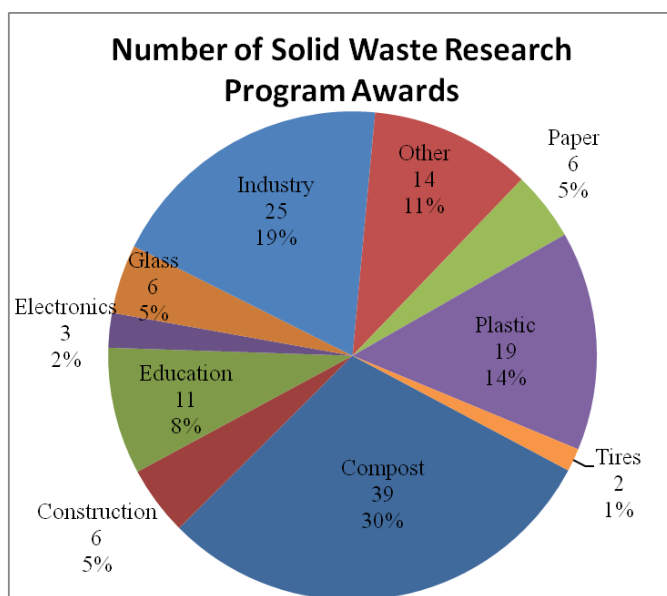


Figure 11. Number of solid waste research program awards according to category.

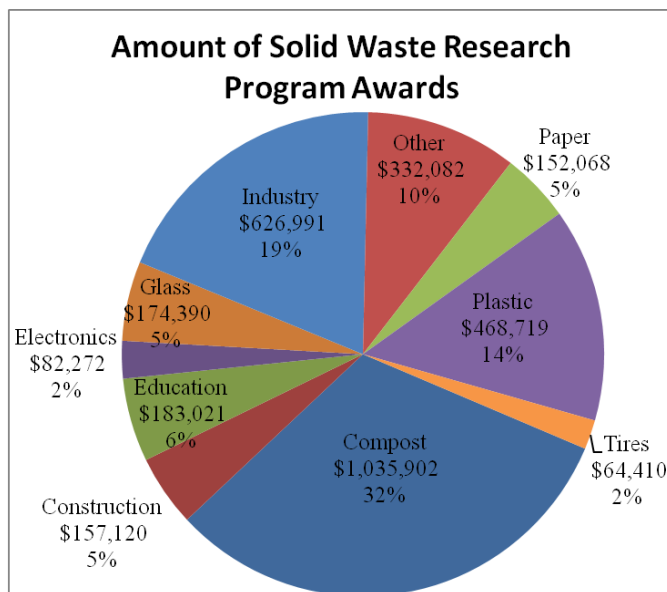


Figure 12. Solid waste research program award amounts according to category.

Organization

Awards were split according to which type of organization they were distributed to, including business (237 awards, \$22.6 million), government agencies (225 awards, \$10.6 million), nonprofit organization (50 awards, \$3.1 million), and unknown (4 awards, \$0.1 million) (No information has been found on the unknowns). Figure 13 shows the number of awards according to organization category and program. Figure 14 shows the amount according to organization and program.

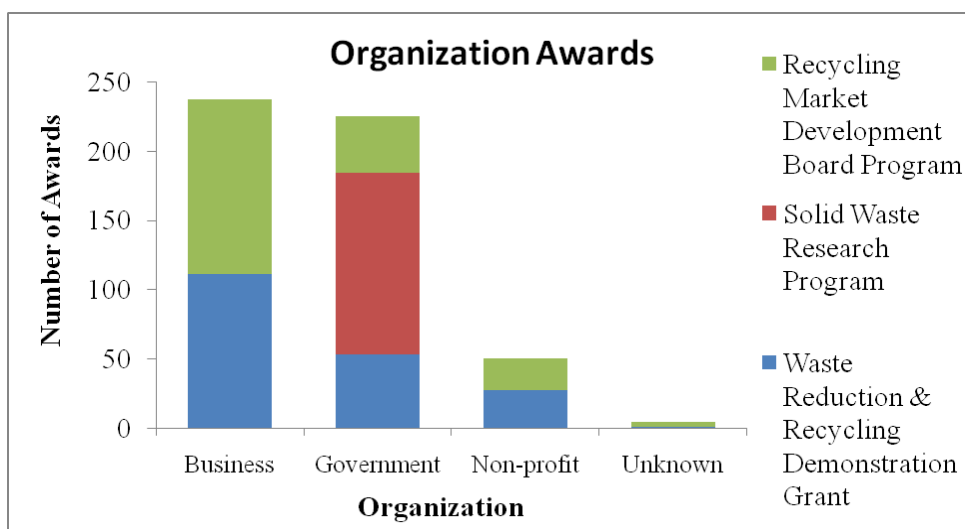


Figure 13. Number of awards according to organization category and program.

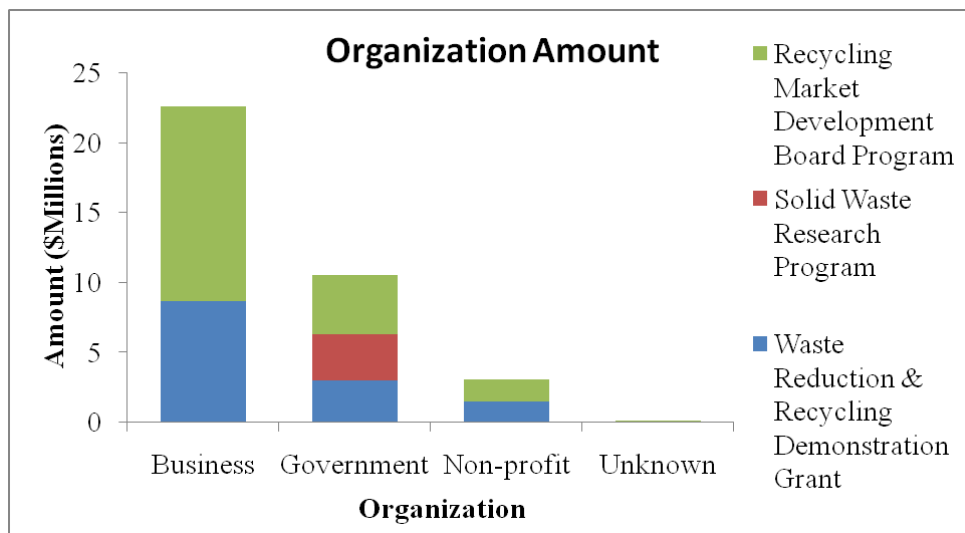


Figure 14. Dollar amount of awards according to organization category and program.

WRRDG is broken down into 111 awards for businesses (\$8.68 million), 53 awards for government agencies (\$3.02 million), 27 awards for non-profit organizations (\$0.09 million).

All SWRP awards were given to government agencies, most of which were to university faculty.

RMDB gave funding to 126 businesses (\$13.95 million), 41 government agencies (\$4.28 million), 23 non-profit organizations (\$1.6 million) and 3 unknowns (\$0.04 million).

Viable Entities

Viable entities were only recorded for WRRDG and RMDB. The 385 awards were given to 246 different entities of which 174 are still viable entities while 72 closed or unknown. Of the 246 viable entities, 25 are nonprofit organizations, 49 are government agencies, and 100 are business entities. Figure 15 shows the number of awards given to viable entities according to program and type of entity.

There are 116 viable entities who received awards from the WRRDG, 60 are businesses, 41 are government agencies, and 15 are non-profit organizations.

There are 58 viable entities who received awards from the RMDB, 40 are businesses, 8 are government agencies, and 10 are non-profit organizations.

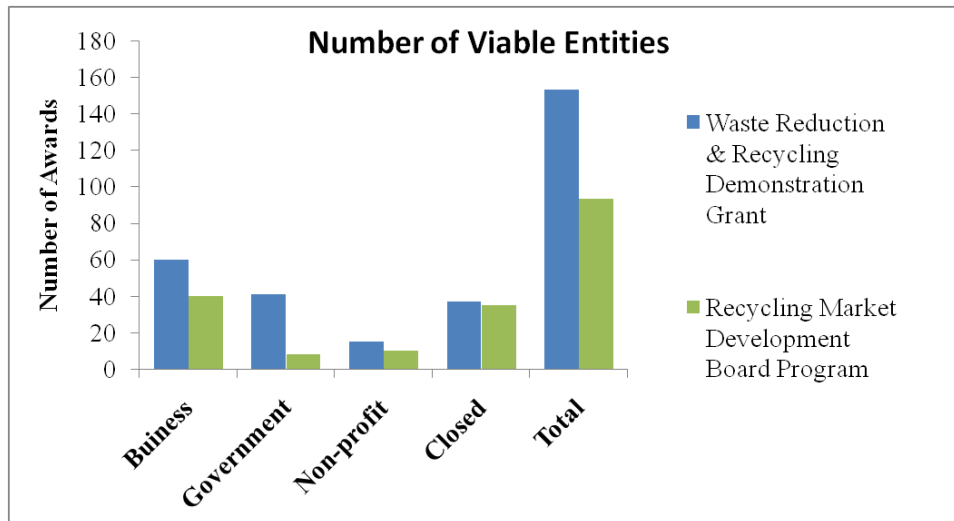


Figure 15. Number of viable entities according to type and program.

Preliminary survey

Company Profiles

The following are examples of 10 Wisconsin entities that received 20 awards from WRRDG or RMDB programs totaling \$1,384,157.

Commercial Recycling Corporation in Medford, WI, recycles mainly paper products along with plastic and nonferrous metal. From 1995 to 1996 it was given four grants and one loan from the RMDB totaling \$189,296. Projects included the purchase of ten balers and a paper shredder. The first project was initially surveyed which was for the purchase of three retail paper balers worth \$6,184.

Cascade Asset Management, LLC received \$340,723, collectively, in 1999, 2000, 2005 and 2006. Three grants from the WRRDG and one loan from the RMDB were used for electronics recycling, specifically glass, plastic, metals, paper, and cathode ray tubes. Cascade has operated in Madison since it was formed in 1999. Cascade has grown from 3 employees to over 65 currently.

Barron County Habitat for Humanity Restore was established in 2007 with an \$110,050 grant from the WRRDG. Project activities were designed for the collection and resale of usable construction and demolition material. They continue to divert material from landfills.

Bonstone Materials Corporation completed a feasibility study and marketing plans for an epoxy adhesive component by using rubber tire particles with a \$25,000 grant from the RMDB in 1996. The epoxy product was never commercialized due to an insufficient market need.

Chicago Art & Glass Jewels, Inc in Cedar Grove, WI, was given a WRRDG in 1991 for \$148,453 to test if post-consumer glass could be used to manufacture sheet glass and pressed glassware. The RMDB awarded \$16,500 in 1996 to research the use of co-mingled container glass in an art glass manufacturing facility. The company continues to be successful with shipments to over 35 countries.

FEECO International, Inc. was awarded a \$150,000 in 1997 from the WRRDG to demonstrate the encapsulation of grass seed in papermill sludge for fertilizer. A second grant was given from the RMDB in 1998 for \$15,000. These grants were the basis for the development of a new company called ENCAP, LLC, which currently employs approximately 25 people.

GranTek in Green Bay, WI, conducted a market analysis and product research for a cat litter product manufactured from paper mill sludge with \$14,400 from the RMDB. GranTek, now a subsidiary of Kadant Inc., continues to manufacture cellulose granular products including a premium cat litter, industrial absorbents, and an agricultural carrier.

CRI Recycling Services, Inc. in Woodville, WI, used their \$109,735 grant from WRRDG to demonstrate a technology that separates used oils and other petroleum based fluids from sorbent clay and diatomaceous earth, recycling the oil and demonstrating the commercial viability of the processed material to replace virgin sorbent material. CRI Recycling Services' successful solvent extraction process continues to be a unique recycling process for oil sorbent material.

Plymouth Foam Products was given two grants from WRRDG program for plastic product development. In 1994, they received \$150,000 to utilize post-consumer and post-industrial expanded polystyrene (EPS) packaging and insulation waste materials in the production of homogeneous foam blocks with a waste content as high as 100 percent. The second grant for \$100,000 demonstrated the technical and economic viability of manufacturing and marketing laminated insulation board with a core of 100% reground scrap expanded polystyrene (EPS) from Wisconsin sources.

Reynolds Urethane Recycling, Inc. of Middleton, was awarded \$15,000 in 1998 for carpet and carpet padding recycling from the RMDB. The award has helped employment rise from three people to 15.

Survey Results

Surveys were distributed to the ten previously listed organizations, with four completing the survey. Out of the 41 questions, three respondents answered 76% of the questions and one answered 61%.

When asked to evaluate the grant/loan program process, three were neutral and one said it was somewhat difficult.

Three of the four claimed the funding allowed their business to expand through a larger customer base, a new manufacturing process or the start of a new business.

Two respondents did not receive any other funding opportunities while the other two received bank loans and company investments. One organization which did not receive any other funds stated the investment would not have been implemented without the funds while three others said it was unknown.

Two investments are still in use for the same material while two others are not in use; these are due to insufficient market need and worn out equipment.

Three organizations were able to determine the amount of tons recycled since the investment was funded, one claimed 16,700 tons and a second claimed 16,000 tons for 15 years, totaling 240,000 tons, and the third collected 20,000 tons.

Three of the four organizations were able to provide employment statistics with the hiring of more employees (12; 25; 3) with average employee compensation (\$36,000; \$34,000; \$53,000, respectively), average employee hourly wage (\$15; \$13; \$15, respectively) and average employee hours per week (50; 43; 48, respectively).

One organization stated the investment's pretax net revenue generated in 2010 was \$1 million with gross revenue generated in 2010 at \$4 million. Another organization stated their investment's gross revenue generated in 2010 was \$3 million.

Finally, when asked if they would be able to utilize additional market development funds to institute new recycling projects or establish new recycling market that it could not currently do with existing resources, two companies responded yes with projects costing \$176,000 and \$21,000.

Conclusion

Recycling market development efforts in the State of Wisconsin have seen a significant funding decline over the past ten years. With the eliminations of the RMDB and the diversion of

WRRDG funding allocations, Wisconsin entities have to search elsewhere for recycling project funds and compete with other non-recycling projects. The funding decline has placed Wisconsin in the lower echelon of states for recycling market development with 34 other states that also don't provide funding. Examples of states still distributing grants or loans shows how they continue to thrive through the collection of fees, such as Nebraska's \$1.25 per ton fee on municipal solid waste landfill disposal. Wisconsin has a similar fee of \$7 per ton, but revenue is transferred to Wisconsin's general fund and not allocated for market development efforts.

Since 1989, Wisconsin has distributed over 516 awards for over \$36.4 million to recycling research and development projects. The majority of the awards were given as grants, with loans making up only 6.8%. The major material categories funded include construction & demolition, education, industry and plastic. These markets have continued to expand and improve since 1989, with increased recycling rates and citizen knowledge.

The effectiveness of recycling market development efforts can be assessed, in part, from the number of entities that received funding and are still using or expanding operations associated with the funded equipment, process or analysis. Of the 385 RMDB and WRRDG awards received by 246 entities, 70.7% are still viable today. This not only includes businesses which provide employment opportunities, it also includes government agencies and non-profit organizations which provide citizens with enhanced recycling opportunities and lower cost for recycling. Of the 70.7%, it is not certain how many completed the award objectives and are still recycling today, which is an area where further research may be needed.

The preliminary survey showed 75% of participants are neutral to the difficulty of the grant or loan application process, whereas 25% said it was somewhat difficult. This information is somewhat more difficult to obtain and assess, as the original contact personnel are not always employed at the same company. Of the four companies that did respond, one determined their investment would not have been completed without the recycling market development funds.

Two of the original investments are still in use, with a third company reporting that they updated the worn out equipment, but still recycling the same material. Collectively, the three entities have diverted 276,700 tons of material from landfills. They have also collectively created 40 Wisconsin jobs with employee compensation totaling \$1,441,000. This is \$56,843 more than what the 10 Wisconsin entities received combined. Two companies have reported making a combined \$7 million in gross revenue during 2010, providing federal, state and local governments with substantial tax revenues.

Of the four respondents, two determined they would currently have potential recycling market development projects if recycling market development funds were available. This would allow these companies to expand, create more jobs, and provide more tax revenues.

As the time since these recycling market development efforts took place gets longer, program files and information continues to be destroyed, forgotten or lost. Minimal information is known or available regarding the efforts of the Recycling Market Development Board program, since state files are kept for ten years and then destroyed. Surveying additional Wisconsin entities

could help further this research project to make more definitive conclusions as to the effectiveness of Wisconsin recycling market development efforts that occurred in the 1990s and 2000s.

References

- Solid Waste Reduction, Recovery and Recycling, Wis. Stats. ch. 287, § 287.25 (2011).
- Waste Reduction and Recycling Demonstration Grants, Wis. Admin. Code. chs. NR 548, § 548.01 - 548.06 (2006).
- Wisconsin Department of Natural Resources. (2006). *Waste Reduction & Recycling Program*. Wisconsin Department of Natural Resources. PUB-WA-422 2006.
- Wisconsin Legislative Fiscal Bureau. (2009). *Solid Waste Recycling and Waste Reduction: Informational Paper 67*. Comp. Kendra Bonderud. Madison. *Legislative Fiscal Bureau*.
- Wisconsin Legislative Fiscal Bureau. (2011). *Solid Waste Recycling and Waste Reduction: Informational Paper 71*. Comp. Kendra Bonderud. Madison. *Legislative Fiscal Bureau*.

Appendix 1: Recycling Market Development Board Survey

Please be advised when the term "organization" is used, it refers to your company, nonprofit organization or government agency.

By checking the box below, you give consent for any and all information provided in this survey to be aggregated as part of the final research report.

☐ Approve

1 What is your organizations six (6) digit North American Industry Classification System (NAICS) code or Standard Industrial Classification (SIC) code? If known.

1st NAICS or SIC code _____

2nd NAICS or SIC code (If needed) _____

2 What category best defines your organization's role as a recycling company? Mark all that apply.

☐ Hauler

☐ Manufacturer

☐ Processor

☐ Remanufacturer

☐ Broker

☐ Reuse

3 Has your organization expanded due to the Recycling Market Development funding received?

☐ Yes. Please explain... _____

☐ No

4 Were any partnerships started with other businesses, nonprofit organizations, or government agencies due to the funding?

☐ Yes. With who? _____

☐ No

5 Was a new business started as a result of the Recycling Market Development funding received?

☐ Yes. What is the name? _____

☐ No

6 What is your knowledge about the Recycling Market Development Board funding distributed to your organization?

☐ No knowledge, the original contact is not with the organization

☐ Knowledge from records

☐ Firsthand knowledge, I worked on the project

7 How did your organization learn about the Recycling Market Development Board program?

☐ Recycling Market Development

☐ Flyers

Commodity Specialist

☐ Conference

☐ Website

☐ Other _____

8 How would your organization rate the Recycling Market Development Board program process? (e.g. program discovery, commodity specialist guidance, application process, program guidelines)

- | | |
|--|-------------------------------------|
| <input type="radio"/> Very Difficult | <input type="radio"/> Somewhat Easy |
| <input type="radio"/> Difficult | <input type="radio"/> Easy |
| <input type="radio"/> Somewhat Difficult | <input type="radio"/> Very Easy |
| <input type="radio"/> Neutral | |

9 What did your organization dislike about the Recycling Market Development Board funding process, therefore would change? (e.g. program discovery, application process, program guidelines, commodity specialist guidance)

10 What did your organization like about the Recycling Market Development Board funding process, therefore would keep? (e.g. program discovery, application process, program guidelines, commodity specialist guidance)

11 Please provide a brief overview of how your organization utilized the funding it received as a result of the Recycling Market Development Board program?

12 What was the total cost of the investment for which you received funding?

\$ _____

13 What percentage of this investment was funded from the Recycling Market Development funds?

_____ %

14 Was any other financial assistance (e.g. loans, grants, private equity) obtained as part of the reduction/recycling investment?

- ☐ No
☐ Yes
☐ Unknown

14.1 What was the source of the other funds?

15 Would the investment have been implemented without the Recycling Market Development Board funds?

- ☐ Yes
- ☐ No
- ☐ Unknown

Q15.1 Please explain how the project could have been financed without the Recycling Market Development funds.

16 Did the investment funded by Recycling Market Development Board funds...

- | | |
|---|--|
| <input type="radio"/> Modify an existing process or equipment. | <input type="radio"/> Support educational activities |
| <input type="radio"/> Implement or purchase a new process or equipment. | <input type="radio"/> Provide market assessment |
| | <input type="radio"/> Other |

16.1 Please explain how.

17 Is the investment, funded by the Recycling Market Development Board, still in use?

- ☐ Yes
- ☐ No

17.1 If you answered “No” to 17, please briefly explain why the investment is not currently being utilized.

17.2 If you answered “Yes” to 17, for what type of materials is it using?

- ☐ Same material
- ☐ Different material

18 Due to the funded project, approximately how much material (in tons) has been diverted from landfills since the time of funding?

_____ Tons

19 If possible, please provide yearly amounts (in tons) since the time of the grant.

	Material 1	Material 2	Material 3
Material:			
1990 (tons)			
1991 (tons)			
1992 (tons)			
1993 (tons)			
1994 (tons)			
1995 (tons)			
1996 (tons)			
1997 (tons)			
1998 (tons)			
1999 (tons)			
2000 (tons)			
2001 (tons)			
2002 (tons)			
2003 (tons)			
2004 (tons)			
2005 (tons)			
2006 (tons)			
2007 (tons)			
2008 (tons)			
2009 (tons)			
2010 (tons)			

20 Were there any problems with the project? Please explain.

Quality of recycled material _____

Cost of process _____

Quantity of materials _____

Cost of recycled material _____

Loan repayment _____

Recycling Market Development Board guidelines on reporting _____

Adequacy of Recycling Market Development Board funding _____

Other _____

- 21 Have any new recycling markets been developed as a result of your investment/funding?
- ☐ Yes
 - ☐ No
 - ☐ Unknown

21.1 What type of market was developed or resulted due to your efforts?

22 As a result of funding your investment, was employment impacted?

- ☐ More workers hired
- ☐ Fewer workers needed
- ☐ Unknown

22.1 Please explain previous employment impacts (i.e. how many and when).

22.21 If “Unknown” was **NOT** selected in 22, please describe the employee statistics. What is the average employee compensation (wages plus benefits) per year?

22.22 What is the average employee hourly wage?

22.23 What are the average employee hours per week?

23 During 2010, what was the investment’s pretax net revenue generated from your organization?

\$ _____

24 During 2010, what was the investment’s gross revenue generated from your organization?

\$ _____

25 In a typical year, what percentage of total organization revenue is made from the investment over the time of the project?

_____ %

26 What material(s) does your organization recycle? Select all that apply.

- | | |
|---|--|
| <input type="radio"/> Aerosol and Paint Cans | <input type="radio"/> Mixed Residential Paper |
| <input type="radio"/> Appliances | <input type="radio"/> Mixed Waste Compost |
| <input type="radio"/> Aluminum Beverage & Food Containers | <input type="radio"/> Newsprint |
| <input type="radio"/> Batteries | <input type="radio"/> Office Paper |
| <input type="radio"/> Bi-Metal Containers | <input type="radio"/> Oil Filters |
| <input type="radio"/> Carpet Padding | <input type="radio"/> PET Plastic Containers |
| <input type="radio"/> Carpeting | <input type="radio"/> Plastic Film |
| <input type="radio"/> Coal Ash and Sludge | <input type="radio"/> PS Foam Packaging |
| <input type="radio"/> Construction & Demolition Debris | <input type="radio"/> Pulp & Paper Mill Sludge |
| <input type="radio"/> Corrugated Cardboard | <input type="radio"/> Scrap wood-pallets |
| <input type="radio"/> Glass containers, Flint | <input type="radio"/> Separated Colored Glass |
| <input type="radio"/> HDPE, Blow Molded Containers | <input type="radio"/> Shredder Fluff |
| <input type="radio"/> HDPE Injection Molded Containers | <input type="radio"/> Steel Food & Beverage Containers |
| <input type="radio"/> Food Waste | <input type="radio"/> Textiles |
| <input type="radio"/> Foundry By-Products | <input type="radio"/> Tires |
| <input type="radio"/> Furniture | <input type="radio"/> Used Motor Oil |
| <input type="radio"/> Magazines | <input type="radio"/> Yard Debris |
| <input type="radio"/> Mixed & Broken Glass | <input type="radio"/> Other _____ |
| <input type="radio"/> Mixed 3-7 Plastic Containers | <input type="radio"/> None |

27 If additional market development funds were available; could your organization utilize the funds to institute new recycling projects or to establish new recycling markets that it cannot currently do?

- ☐ Yes
☐ No

27.1 What would be the estimated cost of the project you would like to implement?

\$ _____

27.2 Which type of financing would you be more inclined to apply for?

- ☐ Grant
☐ Loan
☐ Rebate
☐ Other _____

28 Is there anything you would like to tell us about the Recycling Market Development Board program or related programs?

Appendix II: Waste Reduction and Recycling Demonstration Grant Survey

Please be advised when the term "organization" is used, it refers to your company, nonprofit organization or government agency.

By checking the box below, you give consent for any and all information provided in this survey to be aggregated as part of the final research report.

☐ Approve

1 What is your organizations six (6) digit North American Industry Classification System (NAICS) code or Standard Industrial Classification (SIC) code? If known.

1st NAICS or SIC code _____

2nd NAICS or SIC code (If needed) _____

2 What category best defines your organization's role as a recycling company? Mark all that apply.

☐ Hauler

☐ Processor

☐ Broker

☐ Manufacturer

☐ Remanufacturer

☐ Reuse

3 Has your organization expanded due to the Recycling Market Development funding received?

☐ Yes. Please explain... _____

☐ No

4 Were any partnerships started with other businesses, nonprofit organizations, or government agencies due to the grant?

☐ Yes. With who? _____

☐ No

5 Was a new business started as a result of the Waste Reduction and Recycling Demonstration Grant received?

☐ Yes. What is the name? _____

☐ No

6 What is your knowledge about the Waste Reduction and Recycling Demonstration Grant distributed to your organization?

☐ No knowledge, the original contact is not with the organization

☐ Knowledge from records

☐ Firsthand knowledge, I worked on the project

7 How did your organization learn about the Waste Reduction and Recycling Demonstration Grant program?

☐ Wisconsin DNR Employee

☐ Website

☐ Other _____

☐ Flyers

☐ Conference

8 How would your organization rate the Waste Reduction and Recycling Demonstration Grant program process? (e.g. program discovery, commodity specialist guidance, application process, program guidelines)

- | | |
|--|-------------------------------------|
| <input type="radio"/> Very Difficult | <input type="radio"/> Somewhat Easy |
| <input type="radio"/> Difficult | <input type="radio"/> Easy |
| <input type="radio"/> Somewhat Difficult | <input type="radio"/> Very Easy |
| <input type="radio"/> Neutral | |

9 What did your organization dislike about the Waste Reduction and Recycling Demonstration Grant process, therefore would liked changed? (E.g. program discovery, application process, program guidelines, commodity specialist guidance)

10 What did your organization like about the Waste Reduction and Recycling Demonstration Grant process, therefore would keep? (E.g. program discovery, application process, program guidelines, commodity specialist guidance)

11 Please provide a brief overview of how your organization utilized the funding it received as a result of the Waste Reduction and Recycling Demonstration Grant program?

12 What was the total cost of the investment for which you received funding?

\$_____

13 What percentage of this investment was funded from the Waste Reduction and Recycling Demonstration Grant?

_____ %

14 Was any other financial assistance (e.g. loans, grants, private equity) obtained as part of the investment?

- ☐ No
- ☐ Yes
- ☐ Unknown

14.1 What was the source of the other funds?

15 Would the investment have been implemented without the Waste Reduction and Recycling Demonstration Grant funds?

- ☐ Yes
- ☐ No
- ☐ Unknown

15.1 Please explain how the investment could have been financed without the Waste Reduction and Recycling Demonstration Grant.

16 Did the investment funded by Waste Reduction and Recycling Demonstration Grant...

- ☐ Modify an existing process or equipment.
- ☐ Implement or purchase a new process or equipment.
- ☐ Support educational activities
- ☐ Provide market assessment
- ☐ Other

16.1 Please explain how.

17 Is the investment, funded by the Waste Reduction and Recycling Demonstration Grant, still in use?

- ☐ Yes
- ☐ No

17.1 If you answered “No” to 17, please briefly explain why the investment is not currently being utilized.

17.2 If you answered “Yes” to 17, for what type of materials is it using?

- ☐ Same material
- ☐ Different material

18 Due to the funded investment, approximately how much material (in tons) has been diverted from landfills since the time of funding?

_____Tons

19 If possible, please provide yearly amounts (in tons) since the time of the grant.

	Material 1	Material 2	Material 3
Material:			
1990 (tons)			
1991 (tons)			
1992 (tons)			
1993 (tons)			
1994 (tons)			
1995 (tons)			
1996 (tons)			
1997 (tons)			
1998 (tons)			
1999 (tons)			
2000 (tons)			
2001 (tons)			
2002 (tons)			
2003 (tons)			
2004 (tons)			
2005 (tons)			
2006 (tons)			
2007 (tons)			
2008 (tons)			
2009 (tons)			
2010 (tons)			

20 Were there any problems with the project? Please explain.

Quality of recycled material _____

Cost of process _____

Quantity of materials _____

Cost of recycled material _____

Waste Reduction and Recycling Demonstration Grant guidelines on reporting _____

Adequacy of Waste Reduction and Recycling Demonstration Grant funding _____

Other _____

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